Studienjahr 2024/2025
20. Mai 2025
67. Stück

Universität Salzburg Mitteilungsblatt – Sondernummer

151. Curriculum for the Joint Master's Degree Programme in Human-Computer Interaction
(Curriculum 2025)

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In its session on 11.03.2025 the Academic Senate of the Paris Lodron University of Salzburg enacted the curriculum for the English Joint Master's degree programme in Human-Computer Interaction formally approved by the curriculum commission Human-Computer Interaction of the University of Salzburg in its session on 27.01.2025 in the following version.

The legal basis for the curriculum is the Federal Act on the Organisation of Universities and their Studies (Universities Act 2002 – UG), Federal Law Gazette I No. 120/2002, as well as the section of the Statutes of the University of Salzburg pertaining to university studies, in the applicable version.

The formal basis of this Joint Master's degree programme in Human-Computer Interaction (HCI) is a cooperation contract between the University of Salzburg and the Salzburg University of Applied Sciences signed on 09.10.2018. Besides financial and administrative-technical regulations, in this cooperation contract an HCI board is defined, consisting of teaching personnel of both institutions as well as students, which serves as a contact point for all administrative bodies of both institutions. Furthermore, for all the individual course admission regulations and examinations, the corresponding regulations of the institution hosting the specific course are applied as defined in the contract.

§ 1 General provisions

(1) The total number of ECTS credit points necessary to complete a degree in the Joint Master's degree programme in Human-Computer Interaction is 120. This corresponds to four semesters of study.

(2) Graduates of the Joint Master's degree programme in Human-Computer Interaction will be awarded the academic title "Master of Science in Engineering", abbreviated "MSc".

(3) The precondition for the admission to the Joint Master's degree programme in Human-Computer Interaction is the completion of a relevant Bachelor's degree programme or of another relevant degree programme of at least the same higher educational level at a recognised domestic or foreign post-secondary institute of education (cf. § 64 para. 3 UG).

(4) To compensate for significant subject-related differences in equivalency the students may be required to complete supplementary examinations worth up to 45 ECTS credit points; these supplementary examinations must be completed by the end of the second semester of the Master's programme. Taking into account the suggestion of the HCI board, only the Rectorate or a member of staff of the University of Salzburg designated by the Rectorate is authorised to decide on whether there are significant subject-related differences in equivalency.

(5) The number of students who can be admitted on this programme is limited to 30 students per academic year from the beginning of the winter semester. The selection of candidates is made on the basis of the application-supporting documents and an interview conducted by both institutions. A detailed description of the process can be found in Annex III: Application procedure.

(6) Each academic achievement to be fulfilled by students has been assigned ECTS credit points. One ECTS credit point equals 25 hours of study, which corresponds to the average number of hours required to achieve the expected learning objectives. An academic year consists of 1500 full hours corresponding to 60 ECTS credit points.

(7) Students with disabilities and/or chronic illnesses must not be subject to any form of discrimination in their studies. The guiding principles of the UN Convention on the Rights of Persons with Disabilities, the Austrian Federal Equal Treatment Act as well as the principles of compensation of disadvantage apply.

(8) The Joint Master's degree programme in Human-Computer Interaction is to be offered fully in English.

§ 2 Subject of the degree programme and qualification profile

(1) Subject of the degree programme

The goal of Human-Computer Interaction (HCI) and thus of the Joint Master's degree programme is the research, design, and improvement of interfaces between users and technical systems including their user experiences (UX). One mission of HCI is to promote the basic understanding and design of technology, taking into account various aspects of human capabilities, their diverse identities and social phenomena surrounding technology use. Particularly, HCI engages with the creation of inclusive interfaces, user experiences and interactive products with the aim of considering and including diverse user groups of technologies. Interdisciplinary research and education in the fields of design, computer science, human sciences and social sciences are necessary to create novel and innovative solutions for problems in the fields of economy, politics and society.

Digitalization or digital transformation describes the change in society and economy through the successive introduction of digital technologies in all areas of life. At the intersection of users and various types of technical systems, HCI specialists can provide support and design interactive products and services. The design includes all aspects that users can experience: the form (e.g., interface or device), the function (i.e. capabilities or purpose the interactive artifact fulfils in a particular context), as well as emotional (e.g., aesthetics) and other characteristics (e.g., reaction speed). Design per se is understood as a creative process in which an entity (a material object, a structure, a process, a situation, an interaction, etc.) is created, modified or developed.

The Joint Master's degree programme in Human-Computer Interaction aims to provide a scientifically sound education and an application-oriented practical training at university level. The guiding principle of a university education of the highest possible quality and scientific character (professional qualification, research ability, dissertation capability) is pursued.

(2) Professional skills and competences (learning outcomes)

In order to cope with current and future tasks, graduates of the Joint Master's degree programme Human-Computer Interaction need a qualification profile that includes a comprehensive knowledge of general concepts (e.g., design thinking, experience-centred design), quality criteria and guidelines (e.g., usability, user experience), corresponding (empirical and design) methods, sensibility towards diverse user identities, current and future interaction approaches, as well as the institutionalization and management of user experience in organizations.

In view of the diversity of positions and activities of graduates of the Joint Master's degree programme Human-Computer Interaction, the competence profile is structured as a network of different specialist competences.

The general professional competencies are a bundle of basic theories and methodologies in the field of HCI extended and supplemented by technical and design skills (i.e., prototyping) as well as knowledge and skills from other disciplines covered by elective courses.

Graduates:

- have a broad basic knowledge of HCI theories, methodology and methods. This includes naming, explaining and discussing HCI theories and paradigms as well as characterizing and differentiating HCI research methodologies based on epistemology, methodological commitments, methods and applications.
- have the ability to systematically investigate an HCI problem on all determinant factors or components and the ability to abstract, generalise and transfer the results obtained. They can formulate precise research questions, select and apply a methodological approach, design and conduct appropriate (user) studies, adequately analyse the collected data and interpret the results.
- can critically reflect and classify scientific knowledge. This includes the analysis and discussion of current scientific literature and materials on HCI in relation to new theories, methodologies, methods, technologies and applications.
- are able to present the acquired knowledge in written and oral form. They can write a scientific paper and present it to a professional audience. This also includes answering subject-specific questions on the topic.
- can plan an HCI project independently in terms of tasks, milestones, time resources and responsibilities as well as collaborate in a team.
- have a professional self-conception and consider ethical principles in their actions. They are able to systematically analyse, critically evaluate and discuss their behaviour and to integrate sustainability considerations into their own future-oriented and responsible actions.
- are able to methodically correctly assess the context of use, use practices, and the requirements of a specific HCI application case, analyse the results, interpret and document them appropriately.
- are able to account for the heterogeneity of today’s users, by (scientifically) engaging with diverse user identities, (digital) ethics, gender aspects, inclusion, as well as societal aspects related to HCI. Understanding these complexities is considered a major driver to design for bespoke designs.
- are able to collaborate with people from diverse cultures due to their intercultural competences.
- are able to collaborate with people from diverse (scientific and designerly) backgrounds due to their inter- and transdisciplinary skills.
- are able to shape the interaction between users and interactive systems by applying appropriate methods and processes for interaction design.
- can design and implement prototypes of interactive user interfaces appropriate to the intended use. This includes the analysis and determination of the necessary functional scope, the systematic selection of the type of prototype as well as the consideration of software and hardware.
- can quantitatively evaluate interactive systems or services (user-based) and analyse the collected data using statistical methods. They are able to formulate concrete research questions, design a corresponding (user) study and interpret their results.
- are able to develop an understanding of complex interdisciplinary usage contexts and to structure them. This includes the application of theoretical knowledge as well as technological and methodological skills.

- are able to conceptualize and plan empirical experiments and conduct adequate statistical procedures for data analysis.
- can apply innovation management methods and techniques appropriately to promote innovation in the HCI field. They accept HCI challenges and systematically develop innovative solutions.
- have practical knowledge of current and future technologies. They are able to identify and use new and emerging technologies to develop concepts and implement prototypes of innovative systems and services.
- have the skills and mastery of the methods to analyse and assess the impact of new technologies on society and the environment through possible applications.
- can work independently on a complex HCI task at the level of an HCI professional. They apply theoretical knowledge as well as technological and methodological skills to tackle a complex, self-identified research problem.
- are able to communicate their findings to a specialist audience in a scientifically appropriate form, both orally and in writing.
- are able to successfully complete a master's thesis.

(3) Importance and relevance of the degree for the scientific community, society, and the labour market

The demand for specialists in Human-Computer Interaction in research and innovation is constantly growing in companies, universities and the public sector. The availability of specialists is of strategic importance for companies when it comes to positioning high-quality products on the international market that are oriented towards users. The development of an individual (new) occupational field requires appropriate training.

The central sectors for graduates of the Joint Master’s degree programme in Human-Computer Interaction are the creative industries, the software industry, commerce & industry, consulting & training as well as academic and application-oriented research & technology organizations.

Graduates of the Joint Master’s degree programme in Human-Computer Interaction often pursue careers in the following occupational fields:

- HCI Researchers
- HCI Professionals/Experts/Specialists
- Usability Engineers
- HCI & UX Innovation Managers
- UX & Usability Experts/Consultants
- User Researchers
- Digital Designers
- Design Engineers
- Interaction Designers

§ 3 Structure of the programme

The Joint Master's degree programme in Human-Computer Interaction comprises 8 modules with a total number of 78 ECTS credit points. In addition, 12 ECTS credit points are assigned for free elective courses The Master's thesis is worth 25 ECTS credit points, there is 1 ECTS point assigned to a master's seminar and the master's examination is assigned 4 ECTS points.

	ECTS
Contextual Methods (MET)	12
Design & Interaction (DES)	12
Prototyping & Technologies (PRO)	12
Ethics, Diversity & Society (EDS)	6
HCI & Research (RES)	12
HCI & Practice (PRA)	6
Theories & Future (THE)	6
HCI & Industry (IND)	12
Free elective courses	12
Master thesis seminar	1
Master's thesis	25
Master's exam	4
Total sum	**120**

§ 4 Types of courses

The programme comprises the following types of courses:

Lecture courses (VO) provide an overview of a subject or one of its sections and its theoretical approaches and present different doctrines and methods. Contents are primarily presented in the style of a speech. A lecture course is not continuously assessed, attendance is not compulsory.

Tutorial and lecture courses (UV) combine a theoretical introduction to a specific topic with practical skills, whereby the character of the course is predominantly practical. A tutorial and lecture course is a continuous assessment course, attendance is compulsory.

Lecture with introductory seminar courses (VP) combine a theoretical introduction to a subarea with the active participation of the students to impart basic knowledge and skills in academic work. A lecture with introductory seminar course is a continuous assessment course, attendance is compulsory.

Seminars courses (SE) are advanced academic courses to acquire more in-depth knowledge, to discuss and reflect academic issues through active participation on the part of the students. A seminar course is a continuous assessment course, attendance is compulsory.

Colloquium courses (KO) serve as a forum for academic discussion, debate and collaboration, the consolidation of specialist knowledge and the specialised supervision of theses, dissertations, and research. A colloquium is a continuous assessment course, attendance is compulsory.

Integrated courses (ILV – Salzburg University of Applied Sciences course type) combine knowledge input with experience-based learning. They connect theory-based lectures with practical problem-based exercises carried out by students in order to deepen knowledge of the subject matter.

Laboratory (LB – Salzburg University of Applied Sciences course type) exercises serve the training of knowledge obtained in lectures and other course types. In the course, students practice laboratory experiments on state-of-the-art equipment and discuss test results (e.g. as preparation for scientific work) in small groups.

Projects (PT – Salzburg University of Applied Sciences course type) are independent and problem-based solving exercises on complex and practical issues of a larger scope taken by individual students or small groups. Project management is the responsibility of the student(s), including the allocation of time, in consultation with project supervisors.

Individual training (IT – Salzburg University of Applied Sciences course type) serves to deepen the theory-based, practice-oriented and discursive examination of selected problems, whereby students are expected to actively acquire knowledge and systematically work out contributions. Particular attention is paid to individual supervision for students.

Note that types VO, UV, VP, SE and KO are exclusively used at University of Salzburg, while types ILV, LB, PT and IT are used exclusively at Salzburg University of Applied Sciences. All courses involve continuous assessment with the exception of lectures (VO). In all courses attendance is obligatory with the exception of lectures (VO).

§ 5 Programme content and schedule of study

The following contains a list of modules and courses of the Joint Master's degree programme in Human-Computer Interaction. The attribution to semesters serves as a recommendation designed to ensure that the order in which the courses are taken is optimally built on previous knowledge and that the workload of 60 ECTS credit points within an academic year is not exceeded. However, modules and courses can be taken in a different order if there are no preconditions according to § 11.

Detailed descriptions of the modules including the knowledge, methods, and skills to be imparted can be found in Annex I: Description of modules.

Master's Programme in Human-Computer Interaction								
Module	**Course**	**SHrs**	**Type**	**ECTS**	**Semester with ECTS**			
					I	**II**	**III**	**IV**
(1) Compulsory modules								
Module 1 - Contextual Methods (MET)								
	Foundations of HCI Methodologies[1]	2	VP	2	2			
	Basic Research Methods[1]	2	UV	4	4			
	Advanced Research Methods[3]	3	UV	6		6		
Subtotal for module MET		7		12	6	6	0	0
Modul 2 - Design & Interaction (DES)								
	Interaction Design[1]	2	UV	3	3			
	Design Thinking for Digital Innovation[2]	2	ILV	3	3			
	Human Factors & Design Principles[1]	2	VO	2	2			
	Contextual Experience Engineering[1]	2	UV	4		4		
Subtotal for module DES		8		12	8	4	0	0
Module 3 - Prototyping & Technologies (PRO)								
	Applied Prototyping Skills for HCI[2]	4	ILV	6	6			
	Interaction Approaches & Technologies[2]	4	LB	6		6		
Subtotal for module PRO		8		12	6	6	0	0
Module 4 - Ethics, Diversity & Society (EDS)								
	Ethics & Sustainability[2]	1	ILV	1,5	1,5			
	Diversity & Intercultural Aspects[2]	1	VO	1,5	1,5			
	Society, Responsibility & Legal Aspects[2]	2	VO	3	3			
Subtotal for module EDS		4		6	6	0	0	0
Module 5 - HCI & Research (RES)								
	Lecture Series: HCI & Related Disciplines[3]	2	KO	1		1		
	HCI Research Trends[1]	2	SE	3		3		
	HCI Research Project[3]	3	PT	8		8		
Subtotal for module RES		7		12	0	12	0	0
Module 6 - HCI & Practice (PRA)								
	Complex Adaptive Systems and Innovation[2]	2	ILV	3			3	
	User Experience in Practice[2]	2	ILV	3			3	
Subtotal for module PRA		4		6	0	0	6	0
Module 7 - Theories & Futures (THE)								
	Theories in HCI[1]	2	VP	2			2	
	HCI Futures[3]	2	SE	3			3	
	Master Thesis Preparation[3]	1	SE	1			1	
Subtotal for module THE		5		6	0	0	6	0
Module 8 - HCI & Industry (IND)								
	Experience Leadership[1]	2	SE	4			4	
	HCI Industry Project[3]	2	PT	8			8	
Subtotal for module IND		4		12	0	0	12	0
(2) Free elective courses				**12**	**4**	**2**	**6**	**0**
(3) Master thesis seminar[3]		1	SE	**1**				**1**
(4) Master's thesis[3]			IT	**25**				**25**
(5) Master's exam[3]				**4**				**4**
Sum Total				**120**	**30**	**30**	**30**	**30**

[1] Courses held by University of Salzburg
[2] Courses held by Salzburg University of Applied Sciences
[3] Joint courses by University of Salzburg and the Salzburg University of Applied Sciences

§ 6 Free elective courses

(1) In the Joint Master's degree programme in Human-Computer Interaction students are to complete free elective courses totalling 12 ECTS credit points. These free elective courses can be selected from the range of courses offered by all recognised post-secondary educational institutions without restriction and are designed to further the acquisition of additional professional skills and to strengthen individual areas of focus within a student's course of study.

(2) If the courses chosen are closely subject-related to the amount of 12 ECTS credit points, the free elective courses can constitute a supplementary note in the Master's certificate as "elective course module".

(3) Recommended elective courses cover the range of the following subject areas (but are not limited to): artificial intelligence, computer science, digitalization, design, multimedia, geo-informatics, data science, statistics, psychology, sociology, gender studies, foreign languages, philosophy of science.

§ 7 Master's thesis

(1) The Master's thesis serves to demonstrate that the students have acquired the capability to independently perform academic research in the field of Human-Computer Interaction according to current academic research methods and standards.

(2) The topic of the Master's thesis should be chosen in such a way that it is reasonable and appropriate to complete the thesis within six months (cf. § 81 para. 2 UG).

(3) The topic of the Master's thesis must be taken from one of the modules in the Master's programme. The student is entitled to suggest a topic or to choose the topic from a number of topics proposed by the available thesis advisors.

(4) The Master's thesis is worth 25 ECTS credit points.

(5) It is to be noted that both the student's work on the topic and the advisor's work with the student are subject to the Austrian Copyright Act, Federal Law Gazette No. 111/1936 (cf. § 80 para. 2 UG).

§ 8 Internship

As part of the free elective courses, students are recommended to complete a practice-oriented internship comprising, or equivalent to, 4 weeks of full-time employment (corresponding to 6 ECTS credit points). The internship must have a reasonable connection to the programme and must be approved by the governing body responsible for study matters at the University of Salzburg prior to starting work.

In the course of a practice-oriented internship the following qualifications can be acquired (among others:)

- Ability to apply the acquired subject-specific competences in a professional context
- Acquaintance with different application scenarios of subject-specific concepts
- Acquisition of soft skills (e.g., teamwork, communication competences, planning competences) in a professional context

§ 9 International mobility

Students of the Joint Master's degree programme in Human-Computer Interaction are recommended to spend a semester of study abroad. The fourth semester is particularly suited for this study abroad. The recognition of courses and other academic achievements completed during the study abroad is

conducted by the governing body responsible for study matters of the University of Salzburg. The documents required for the assessment are to be provided by the student.

It is ensured that semesters abroad are possible without causing a delay in a student's course of study if the following conditions are met:

- during each semester abroad courses and other academic achievements totalling at least 30 ECTS credit points are completed
- the courses and other academic achievements completed during the study abroad are not identical to the content of courses and academic achievements already completed at the University of Salzburg or Salzburg University of Applied Sciences
- before starting the semester abroad, it is stated by means of an official order which of the planned examinations will be recognised for the examinations stipulated in the curriculum.

In addition to subject-specific competences students can acquire the following qualifications by studying abroad:

- Acquisition and deepening of subject-specific knowledge of a foreign language
- Acquisition and deepening of general foreign-language skills (comprehension, conversation, …)
- Acquisition and deepening of organisational skills by independently planning the day-to-day study life in international administrative and university structures
- Familiarising with and studying in international university systems as well as broadening the individual perspectives in the student's own field of study
- Acquisition and deepening of intercultural competences.

Students with disabilities and/or chronic illnesses will be actively assisted by the University of Salzburg and Salzburg University of Applied Sciences in searching for an opportunity to study abroad and in planning the semester abroad.

§ 10 Allocation of study places in courses with a limited number of participants

(1) For the following types of course the number of participants in the Joint Master's degree programme in Human-Computer Interaction is limited as follows:

Lecture courses (VO)	no limit
Tutorial and lecture courses (UV)	15
Lecture with introductory seminar courses (VP)	no limit
Seminar courses (SE)	15
Colloquium courses (KO)	no limit
Integrated courses (ILV)	15
Laboratory (LB)	15
Projects (PT)	15
Individual training (IT)	no limit

(2) If the maximum number of participants is exceeded by the number of enrolments for courses with a limited number of participants, those students for whom this course is part of their curriculum will be given priority.

(3) Study places will be allocated in the order specified in the Statutes of the University of Salzburg.

(4) For students participating in international exchange programmes, additional study places constituting at least ten percent of the maximum number of participants on each course will be available. These study places will be allocated by lot.

§ 11 Admission requirements for exams

There are no courses that constitute a mandatory prerequisite for admission to any other course in the Joint Master's degree programme in Human-Computer Interaction. However, students are urged to follow the recommended plan of study, especially with regard to the following courses:

- the completion of “Basic Research Methods” before “Advanced Research Methods”
- the completion of “Basic Research Methods” before “Contextual Experience Engineering”
- the completion of “Applied Prototyping Skills for HCI” before “Interaction Approaches & Technologies”
- the completion of “Foundations of HCI Methodologies” before “Theories in HCI”
- the completion of “Master Thesis Preparation” to develop a proposal for the master thesis

§ 12 Examination regulations

For courses which are held at University of Salzburg, the examination regulations of the University of Salzburg are applied. For courses which are held at Salzburg University of Applied Sciences, the examination regulations of the Salzburg University of Applied Sciences are applied.

(1) For all the individual course examinations, the examination regulations of the institution hosting the exam are applied.

(2) For joint courses the examination regulations of University of Salzburg apply.

(3) All courses in the module are marked individually based on the module objectives (Continuous assessment courses: assessment of several different components; Lecture courses: assessment through a singular examination).

(4) The final grade of a module is determined in accordance with § 19 para. 3 of the Statutes of the University of Salzburg.

(5) For students with disabilities and/or chronic illnesses, alternative examination regulations suitable for each individual case will be offered.

§ 13 Master’s examination before an examining committee

(1) The Joint Master’s degree programme in Human-Computer Interaction is concluded with a Master’s examination before an examining committee worth 4 ECTS credit points.

(2) Taking the Master’s examination before an examining committee requires proof of successful completion of all prescribed examinations, and positive assessment of the Master’s thesis.

(3) The master’s examination is conducted by an examining committee, consisting of four persons: the supervisor; one examiner each from University of Salzburg and Salzburg University of Applied Sciences; a chairperson, who should neither be the supervisor nor one of the examiners. This ensures that representatives from both institutions, University of Salzburg and Salzburg University of Applied Sciences, are always represented on the commission. The Master examination consists of:

- a presentation of the Master’s thesis by the person taking the examination (approx. 15 minutes),

- questions on the topic of the Master's thesis by the members of the examining committee (approx. 15 minutes),
- questions relating to two modules of the curriculum that are suggested by the student (approx. 20 min.). The student is advised to get in touch with examiners in advance to the exam to negotiate the concrete contents of the modules that will be part of the examination.

§ 14 Effective date

The curriculum will become effective on 1 October 2025.

§ 15 Transitional provisions

(1) Students who are registered for the Joint Master's degree programme in Human-Computer Interaction at the Paris Lodron University of Salzburg (version 2019, bulletin – special number 79; 25. June 2019) at the time this curriculum becomes effective are entitled to complete their studies at the latest by 30. September 2027 in accordance with these study regulations.

(2) Students are entitled to voluntarily enrol in this Master's degree programme at any time within the admission period. A written irrevocable declaration to this effect must be sent to the Admissions Office.

Course equivalency lists can be found in Annex II.

Description of the application procedure can be found in Annex III.

Annex I: Description of modules

Module name	**Compulsory Module 1: Contextual Methods**
Module code	MET
Total workload	12 ECTS
Learning outcomes	Students… • will be able to name, explain and discuss HCI research and design-oriented methodologies and their related methods. • will be able to characterize and differentiate HCI research and design-oriented methodologies and their respective ontologies, epistemologies, aims, methods and applications. • will be able to differentiate between qualitative and quantitative research approaches, study designs, and apply relevant methods in various contexts. • will acquire the skills to design studies, including formulating hypotheses, selecting study designs, and sampling, as well as to understand the nuances of data collection, documentation, and analysis across different research setups. • will gain practical experience in conducting and reporting on both quantitative (e.g., surveys, statistics) and qualitative (e.g., interviews, ethnography) research methods. • will gain an overview of the heterogeneity of contemporary HCI research methods. Based on that, they will be able to name, choose and implement diverse (empirical and design) research methods that are common in HCI. • will gain a sensitivity towards differences in quality criteria, choosing methods for a specific research context and preparing needed study materials.
Module content	Foundations of HCI Methodologies This course provides a comprehensive overview of diverse HCI research and design-oriented methodologies and their historic routes. The course focuses on the differences and commonalities of these methodologies regarding their purpose (e.g., design-led or research-led) as well as their epistemic and ontological commitments. This is done by critically discussing a variety of examples from research and practice. Basic Research Methods The course focuses on understanding qualitative and quantitative research approaches, including the particularities in designing, planning, and implementing qualitative and quantitative/experimental HCI studies. Advanced Research Methods In this course, students will experiment with various study designs (e.g., experimental, qualitative) and related HCI research methods through designing, planning, and implementing small-scale studies. The course provides an overview of the breadth of contemporary (empirical and design) research methods and provides the opportunity to explore the potentials and pitfalls of selected methods in depth. Students will be conducting a series of studies in temporary subgroups and will therefore learn about research ethics and analysis methods.
Courses	Foundations of HCI Methodologies (2 SHrs, 2 ECTS) Basic Research Methods (2 SHrs, 4 ECTS) Advanced Research Methods (3 SHrs, 6 ECTS)
Type of exam	Course-oriented examination: The achievement of teaching and learning objectives is assessed for each course separately by written and/or oral assignments.

Module name	**Compulsory Module 2: Design & Interaction**
Module code	DES
Total workload	12 ECTS
Learning outcomes	Students… • will be able to define basic terms and approaches related to interaction design in HCI. • will be able to design the interaction between users and interactive systems by applying appropriate interaction design methods and processes. • will understand design in HCI and be able to implement a design thinking process. • will know how to identify user needs, formulate a problem statement and conceptualize ideas and develop, evaluate and iterate a lo-fi prototype. • will be able to discuss and critically reflect on design decisions. • will be able to name, explain, illustrate and discuss human factors and design principles. • will know and be able to apply HCI laws in research and design. • will be able to select and explain usability and experience engineering, its methods and apply them to HCI use cases.
Module content	Interaction Design The course introduces the basics of interaction design and the cognitive processes that underlie interaction. It will tackle core skills of design: (re-) framing problems and objectives, unveiling and understanding constraints, mitigating biases (of users and designers), synthesizing solutions, envisioning and selecting alternatives, prototyping intended solutions. The combination of different interaction modalities and the application of appropriate interaction design principles and approaches are practiced based on guided examples. Design Thinking for Digital Innovation The course centres around design thinking to form the foundation of digital innovation. Five phases of design thinking are introduced: empathize, define, ideate, prototype, test. The students will go through each of the five stages, leading up to a final presentation of their outcomes. The course will guide students to work creatively, collaboratively and iteratively on designing interactive systems and immersive experiences. Human Factors & Design Principles The course covers basics in human factors and corresponding principles of user interfaces. The course emphasizes individual human factors and their influence on the design of user interfaces. It discusses pros and cons of several forms of user input and output modalities. It discusses future aspects of human factors and design in an automated world and introduces concepts of universal design. Contextual Experience Engineering This course provides a systematic introduction to usability and experience engineering, overall approaches and methods in engineering processes and their application to HCI. The course will focus on the basics of requirements engineering and analysis activities, specifically, on the mapping to real application contexts and insights from real world practices as well as methodological insights in the context of practical application.

Courses	Interaction Design (2 SHrs, 3 ECTS) Design Thinking for Digital Innovation (2 SHrs, 3 ECTS) Human Factors & Design Principles (2 SHrs, 2 ECTS) Contextual Experience Engineering (2 SHrs, 4 ECTS)
Type of exam	Course-oriented examination: The achievement of teaching and learning objectives is assessed for each course separately, either by a written exam (in the case of lectures), or by written and/or oral assignments (in the case of courses which evaluate student performance at all times).

Module name	**Compulsory Module 3: Prototyping & Technologies**
Module code	PRO
Total workload	12 ECTS
Learning outcomes	Students… • will be able to define and explain the role of different types of prototypes in HCI and interaction design and they will be able to distinguish and choose diverse techniques and processes for prototyping. • will acquire necessary skills for practical implementation of user interface prototypes with different levels of fidelity combining various tools (2D, 3D, physical). • will be able to compare, select, utilize, adapt and implement different interaction technologies according to an application area. • will be able to conceptualize and implement a prototype combining multiple interaction modalities and fundamental building blocks of different interactions.
Module content	Applied Prototyping Skills for HCI This course covers different types of prototypes, HCI prototyping approaches and the practical skills necessary for implementing low-fidelity and high-fidelity prototypes. It considers factors of input, output, application domain, as well as common tools used to implement them. The course also provides the basics of electronics and how to connect hardware with software, including rapid prototyping skills. Interaction Approaches & Technologies This course introduces the concepts and functionalities of different interaction technologies and the fundamental building blocks for different interactions (e.g., motion, haptics, sound, physical materials) in different thematic lab sessions. By exploring, experimenting, and prototyping, students design future digital-physical interactions for specific application areas.
Courses	Applied Prototyping Skills for HCI (4 SHrs, 6 ECTS) Interaction Approaches & Technologies (4 SHrs, 6 ECTS)
Type of exam	Course-oriented examination: The achievement of teaching and learning objectives is assessed for each course separately by written and/or oral assignments.

Module name	**Compulsory Module 4: Ethics, Diversity & Society**
Module code	EDS
Total workload	6 ECTS
Learning outcomes	Students… • know important social and ecological challenges • will be able to analyse and reflect on ethical-moral dilemmas, evaluate opinions from a lecture in their own context of action, argue social issues with a view to their own professional environment, articulate and justify their own opinion in a group discussion. • will be able to discuss and critically reflect current socio-economic crises and their relevance and related responsibility in regard to HCI • understand the connections between cause and effect of issues with socio-ecological implications • will be able to differentiate problem areas which can arise from current technical developments in the professional field of HCI and can argue for a reflected viewpoint taking into account their responsibility as HCI researchers and practitioners. • will be able to recall and discuss societal and legal aspects in relation to HCI. • will be able to define terms, approaches and models related to diversity and interculturality in HCI. • will know how to consider various societal, ethical and intersectional aspects of users' identities in HCI-related cases, and they will be able to collaborate with people from different cultures.
Module content	<u>Ethics & Sustainability</u> This course centres around the annual Symposium on Ethics and Sustainability, which provides the opportunity to take part in diverse talks from experts on a specific topic related to current developments related to sustainability and ethics and participate in an interdisciplinary workshop with students from diverse study backgrounds. The topic of the symposium varies every year. Complementary to the symposium, the lecture will introduce relevant terminologies from HCI and sensitize students in discussions to engage with topics of ethics and sustainability in relation to HCI. <u>Diversity & Intercultural Aspects</u> The course covers the heterogeneity of today's users through engaging with various overlapping attributes of an individual's identity, gender aspects, and societal aspects of HCI by the examination and discussion of examples and case studies. <u>Society, Responsibility & Legal Aspects</u> The course covers professional ethics, ethical guidelines of various professional associations and discussions of case studies. The course further covers perspectives on responsible research and innovation and related theories in relation to socio-ecological challenges. Further, it outlines the protection of intellectual properties, registered designs, media law and GDPR conformity in the working practice of HCI and the HCI-related aspects of data protection, privacy and security.
Courses	Ethics & Sustainability (1 SHrs, 1,5 ECTS) Diversity & Intercultural Aspects (1 SHrs, 1,5 ECTS) Society, Responsibility & Legal Aspects (2 SHrs, 3 ECTS)
Type of exam	Course-oriented examination: The achievement of teaching and learning

	objectives is assessed for each course separately, either by a written exam (in the case of lectures), or by written and/or oral assignments (in the case of courses which evaluate student performance at all times).

Module name	**Compulsory Module 5: HCI & Research**
Module code	RES
Total workload	12 ECTS
Learning outcomes	Students … • will be able to widen their interdisciplinary understanding of HCI as a field, as well as recent trends in related scientific disciplines and are able to reflect their applicability to dedicated HCI contexts. • will be able to identify trends based on literature, conferences, HCI groups and funding calls. • will be able to identify success factors of HCI research. • will be able to reflect and discuss research trends in HCI. • will be able to apply theoretical knowledge, as well as technological and methodological skills to master a complex research problem. • will be able to formulate well-defined research questions and conceptualize an appropriate study. • will be able to select and apply a methodological approach and analyze their data and interpret their findings. • will know how to translate the findings to a design process, which results in an interactive prototype that is tested and iterated based on user feedback. • will be able to document and reflect on their design process, write a scientific research paper and prepare and present their work in a conference presentation.
Module content	<u>Lecture Series: HCI & Related Disciplines</u> This course is a lecture series with invited speakers from the field of HCI and related disciplines, such as psychology, cognitive science, social sciences, behavioural science, design research, data science, information technology and computer science. The topics of the lectures vary depending on the experts and may include visits to dedicated research facilities. The relationships with and influences of the different disciplines, approaches and contexts on HCI are discussed to provide an introduction to the interdisciplinarity of the research field of HCI. <u>HCI Research Trends</u> This course introduces HCI related conferences, journals, international HCI research groups, and national and international HCI related project calls. By analyzing these sources, students will understand how to identify and derive current research trends in HCI and engage with them. <u>HCI Research Project</u> In this course, students will learn to conduct a cohesive, scientific research project. Students will develop research questions and carry out a research project that will result in the design of prototypes. Students will analyse relevant literature and applications. They will engage with users through interviews (or similar methods), analyse and interpret the results. Based on this, students will conduct a design process that includes the conceptualization and design of an interactive prototype. This prototype will be evaluated with end-users. Students will report on their work in a scientific paper presented at the HCI students conference at the end of

	the semester. The course can potentially lead to the submission of papers to an HCI conference. Students will be coached along this entire process.
Courses	Lecture Series: HCI & Related Disciplines (2 SHrs, 1 ECTS) HCI Research Trends (2 SHrs, 3 ECTS) HCI Research Project (3 SHrs, 8 ECTS)
Type of exam	Course-oriented examination: The achievement of teaching and learning objectives is assessed for each course separately by written and/or oral assignments. Lecture Series HCI & Related Disciplines is suggested to be graded on a two-level grading scale.

Module name	**Compulsory Module 6: HCI & Practice**
Module code	PRA
Total workload	6 ECTS
Learning outcomes	Students... • will understand and characterise the role of UX in HCI industry. They will be able to apply organizational, methodological, technological and design principles to economically improve the user experience addressing given real-world industrial problems. • will be able to identify and examine challenges in industrial settings accompanying development processes of complex adaptive systems or services.
Module content	Complex Adaptive Systems and Innovation In this course, students will learn what complexity means for organizational structures, product development processes, innovation, and the management of systems. Based on selected case studies, this course covers actual development processes and different philosophies and their benefits and shortcomings (e.g., agile development) as well as technological and organizational system complexity in industry. This includes the confrontation with existing technical interfaces and infrastructures, established operational processes and stakeholders on multiple hierarchical levels. Additionally, the course shows how decisions influence organizational design and the impact on customers. The course ends with an assignment to conceptualize and organize the integration of an interactive system or service in a predefined industrial environment. User Experience in Practice The course covers methods and procedures in theory and practice as well as the application of organizational, methodological, technological and design skills to practical problems introduced by industry stakeholders. The course introduces practical methods and best practices to advocate for the users while bolstering support with industry stakeholders in a way that builds better team cohesion and improves user experiences.
Courses	Complex Adaptive Systems and Innovation (2 SHrs, 3 ECTS) User Experience in Practice (2 SHrs, 3 ECTS)
Type of exam	Course-oriented examination: The achievement of teaching and learning objectives is assessed for each course separately by written and/or oral assignments.

Module name	**Compulsory Module 7: Theories & Futures**
Module code	THE
Total workload	6 ECTS
Learning outcomes	Students... • will be able to name, explain and discuss theories relevant in HCI. know the purpose and application of theory in HCI research and practice. • will be able to analyse, estimate and speculate about potential impacts of new technologies on society and the environment based on possible application areas. • can name, apply and discuss different futuring methods. • will be well prepared for their Master thesis and Master thesis exam. • will be informed about the requirements, formalities and expectations, and have finalised an exposé for their thesis topic.
Module content	Theories in HCI This course provides a comprehensive overview of theories that are relevant in HCI research. Starting with a historical overview of HCI research, this course will focus on theories that have been influential in HCI, such as cognitive or social theories. Contemporary theories and turns will be introduced to discuss their purposes and applications in HCI research and practice. HCI Futures The course gives an overview of methods to assess, classify and envision the impact of future technologies regarding individual, societal and environmental consequences and introduces related theoretical knowledge. Based on case studies, the analysis, estimation, and envisioning of individual, societal, and environmental impacts of novel technologies will be practiced through an HCI-centric lens. Master Thesis Preparation Students will be introduced to the HCI master thesis guidelines. They will be informed about the requirements of an HCI master thesis and the final master exam and introduced to formalities of the process. They will discuss potential research questions, and appropriate methods. They will be introduced to scientific writing and ethical standards. During the course, each student will develop a master thesis exposé and identify a corresponding supervisor.
Courses	Theories in HCI (2 SHrs, 2 ECTS) HCI Futures (2 SHrs, 3 ECTS) Master Thesis Preparation (1 SHrs, 1 ECTS)
Type of exam	Course-oriented examination: The achievement of teaching and learning objectives is assessed for each course separately by written and/or oral assignments. The Master Thesis Preparation is suggested to be graded on a two-level grading scale.

Module name	**Compulsory Module 8: HCI & Industry**
Module code	IND
Total workload	12 ECTS
Learning outcomes	Students… • will be able to apply management skills and principles to develop, establish and maintain holistic UX strategies for industrial settings. • will be able to master a project that starts with a complex real-world problem in HCI and ends up with a feasible solution for the given problem. • will be able to manage and organize an industrial project. • will be able to identify requirements and needs from their industry partner. • will reflect on, discuss and implement the suggestions from industry in a meaningful way. • will apply their practical prototyping skills and work iteratively on developing the best solution. They will know how to document and present the project according to professional standards.
Module content	<u>Experience Leadership</u> The course covers essential management skills and principles to develop, establish and maintain a holistic UX strategy. Based on existing positive and negative examples, the impact of experience leadership and management is examined in depth. <u>HCI Industry Project</u> The course starts with the presentation of a complex real-world problem by an industry stakeholder or other institution. Students will conduct, organise and manage a project that results in the development of an interactive solution for this problem. During the course students will continuously engage with the industry stakeholders to negotiate their ideas and get feedback. Students will be coached along this entire process.
Courses	Experience Leadership (2 SHrs, 4 ECTS) HCI Industry Project (2 SHrs, 8 ECTS)
Type of exam	Course-oriented examination: The achievement of teaching and learning objectives is assessed for each course separately by written and/or oral assignments.

Module name	**Master Seminar and Exam**
Module code	MS
Total workload	5 ECTS
Learning outcomes	Students... • will be able to reflect and discuss scientific question of their master's thesis as well as the scientific methods used. • will be able to provide feedback to their co-students and implement feedback they receive. • will be able to present acquired knowledge orally using digital support materials. • will be able to prove their specialist and methodical knowledge by discussing aspects of their master's thesis, relevant subjects of the curriculum and other curriculum-relevant content with a professional audience.
Module content	Master thesis seminar The course covers comprehensive and diverse disputation of terms, objectives, structures, core elements, tools and challenges of the master thesis. In a discussion within the peer group, students defend and reflect on the scientific question of their master thesis, its contribution, as well as the scientific methods used. Master's exam The course covers methods and procedures in theory and practice as well as the application of organizational, methodological, technological and design skills to practical problems introduced by industry stakeholders. The course introduces practical methods and best practices to advocate for the users while bolstering support with industry stakeholders in a way that builds better team cohesion and improves user experiences.
Courses	Master thesis seminar (1 SHrs, 1 ECTS) Master's exam (0 SHrs, 4 ECTS)
Type of exam	Course-oriented examination: The achievement of teaching and learning objectives is assessed for each course separately by written and/or oral assignments. The Master thesis seminar is suggested to be graded on a two-level grading scale.

Annex II: Course equivalency lists

OLD Curriculum		**NEW Curriculum**	
Course	ECTS	Course	ECTS
VO HCI Theory & Paradigms	2	VP Theories in HCI	2
UV Foundations of HCI Methodologies	4	VP Foundations of HCI Methodologies	2
ILV Applied Prototyping Skills for HCI	6	ILV Applied Prototyping Skills for HCI	6
VO Human Factors & Design Principles	2	VO Human Factors & Design Principles	2
UV Experience Engineering Methods	4	UV Contextual Experience Engineering	4
UV Interaction Design	3	UV Interaction Design	3
ILV Design Thinking for Digital Innovation	3	ILV Design Thinking for Digital Innovation	3
ILV Ethics & Sustainability	1,5	ILV Ethics & Sustainability	1,5
VO Diversity & Intercultural Aspects	1,5	VO Diversity & Intercultural Aspects	1,5
VO Societal & Legal Aspects in HCI	3	VO Society, Responsibility & Legal Aspects	3
UV Contextual Analysis & Context Capturing + UV Contextual Interaction Design	3+3	UV Advanced Research Methods	6
LB Interaction Approaches & Technologies	6	LB Interaction Approaches & Technologies	6
SE Research Trends in HCI	3	SE HCI Research Trends	3
VO Lecture Series: HCI Related Disciplines + PT HCI Research Project	3+6	KO Lecture Series: HCI Related Disciplines + PT HCI Research Project	1+8
ILV Complex Interactive Systems	3	ILV Complex Adaptive Systems and Innovation	3
SE Impacts of Future Technologies	3	SE HCI Futures	3
ILV User Experience in Practice	3	ILV User Experience in Practice	3
SE Experience Leadership & Innovation Management	3	SE Experience Leadership	4
UV Advanced Contextual Interfaces + PT HCI Industry Project	3+6	PT HCI Industry Project	8
SE Master’s seminar	2	SE Master Thesis Seminar + SE Master Thesis Preparation	1+1

Annex III: Application Procedure

The application procedure consists of four phases:

Phase 1: Online application
Students have to provide the following information for their online application:

- High School diploma (Matura, Abitur, A-levels, …)
- Bachelor's diploma, diploma supplement (including course duration, description of the content and credits) and / or transcript of records including course titles, credit hours & grades, final Grade Point Average (GPA)
- Letter of Motivation describing your motivation, objectives and expectations for Human-Computer Interaction (maximum 1 page in total, in English)
- Short Video Self-Introduction (in English)
- CV (in English)
- Copy of passport
- Bachelor thesis (if already finished)

Phase 2: Preselection

An admission team of experts from University of Salzburg and Salzburg University of Applied Sciences will decide whether applicants will be recommended for phase 3 (interview) based on an evaluation of application documents according to the following criteria:

- Key competences for the intended master's programme
- Motivation, objectives and expectations of the studies
- Previous academic achievements or practical experience
- Exceptionality of the applicant profile

Phase 3: Interview & Preparation Courses

The admission interview is held with members of the staff of University of Salzburg and Salzburg University of Applied Sciences. The contents of this interview refer to the submitted documents and previous knowledge as well as to motivation and personal interests. The interview is conducted in English and lasts about 25 minutes.
During the interview, questions will be asked about the previous knowledge in order to make a decision which preparation courses (i.e. Basics of Programming, Basics of Quantitative Research Methods, Basics of Qualitative Research Methods, Basic Visual Design Skills) have to be completed. Their aim is to harmonise the differences in prior education with regard to the Bachelor's degrees admitted, within the framework of compulsory courses before the start of studies. Each course spans two semester hours and equals one ECTS credit. After the admission interview the admission interview team decides which preparation courses will be mandatory.

Phase 4: Decision on the Recommendation for an Admission
Based on the application documents and the interview, the admission team decides whether the applicant is recommended for the admission. This decision is communicated to the admission department of the University of Salzburg. The final decision on admission is made by University of Salzburg.

Impressum
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